



**CTEH® Project #40442**  
**West Fertilizer Plant Explosion**  
**Summary of Air Monitoring Results**  
**April 28, 2013 11:00**

This data report discusses real-time air monitoring data collected between 4/27/2013 07:00 and 4/28/2013 07:00 in support of remediation operations conducted near the West Fertilizer Plant Explosion in West, TX.

Real-time air monitoring was conducted for volatile organic compounds (VOCs), ammonia (NH<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), percent of the lower explosive limit (LEL) and oxygen (O<sub>2</sub>) using remote-telemetering RAESystems® AreaRAEs and hand-held instruments such as the RAESystems® MultiRAE.

Tables 1 and 2 (below) display data summaries for hand-held and AreaRAE instruments, respectively. Site maps and charts are available as attachments.

**Table 1: Hand-held Real-time Air Monitoring Summary<sup>1</sup>**  
**April 27, 2013 07:00 – April 28, 2013 07:00**

Analyte	Instrument	Number of Readings	Number of Detections	Average of Detections	Range of Detections
<b>Community</b>					
Ammonia	MultiRAE	1	0	NA	< 0.2 ppm
NO <sub>2</sub>	MultiRAE	1	0	NA	< 1 ppm
VOC	MultiRAE	3	1	0.2 ppm	0.2 ppm
<b>Rail Right of Way</b>					
VOC	MultiRAE	1	0	NA	< 0.1 ppm
<b>Work Area</b>					
VOC	MultiRAE	2	1	0.2 ppm	0.2 ppm

<sup>1</sup>Please note: The data displayed here has not undergone complete QA/QC analysis and is presented in a preliminary format.  
PPM = Parts Per Million

**Table 2**  
**Stationary AreaRAE Monitoring Stations Data Logged**  
**4/27/2013 07:00 to 4/28/2013 07:00**

Unit	Analyte	Count of Readings	Count of Detections	Average of Detections	Max Detection
<b>AR13</b>	LEL	366	0	NA	< 1 %
	NH3	5647	0	NA	< 1 ppm
	NO2	5647	0	NA	< 0.1 ppm
	O2	366	366	21.0 %	21.0 %
	VOC	5647	0	NA	< 0.1 ppm
<b>AR14</b>	LEL	545	0	NA	< 1 %
	NH3	5555	104	1 ppm	1 ppm
	NO2	5555	36	0.1 ppm	0.1 ppm
	O2	545	545	21.0 %	21.0 %
	VOC	5555	74	0.1 ppm	0.1 ppm
<b>AR16</b> Mobile Downind Unit	LEL	381	0	NA	< 1 %
	NH3	5326	83	1 ppm	2 ppm
	NO2	5326	13	0.1 ppm	0.1 ppm
	O2	381	381	21.0 %	21.0 %
	VOC	5326	227	0.1 ppm	0.1 ppm
<b>AR17</b>	LEL	432	0	NA	< 1 %
	NH3	4973	0	NA	< 1 ppm
	NO2	4973	0	NA	< 0.1 ppm
	O2	432	432	20.9 %	20.9 %
	VOC	4973	208	NA	0.4 ppm
<b>AR18</b>	LEL	544	0	NA	< 1 %
	NH3	4890	8	1 ppm	1 ppm
	NO2	4890	1	0.1 ppm	0.1 ppm
	O2	544	544	21.0 %	21.0 %
	VOC	4890	1	0.5 ppm	0.5 ppm

<sup>1</sup>The data in this table may include electronic drift. Drift is defined as any interference in the electrochemical sensor's ability to accurately report the concentration of a chemical in the atmosphere. Humidity and temperature changes throughout the monitoring period are typical sources of drift. Additionally, the data has not undergone complete QAQC as of this time.



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# Appendix





<sup>1</sup>All monitoring performed outside of the Work Area boundary and the Rail Road right of way is considered Community Monitoring.

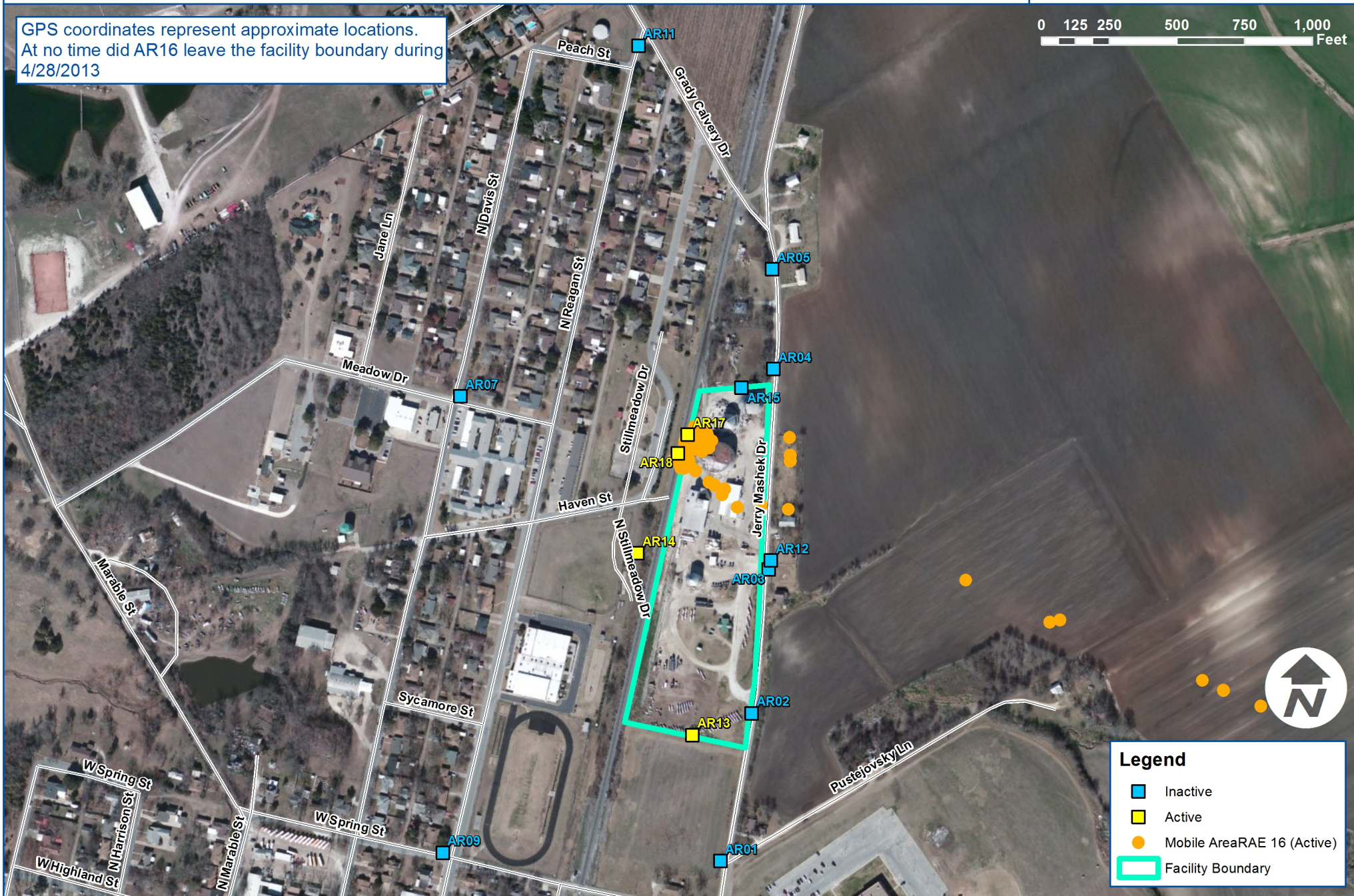


## AreaRAE Monitoring Station Locations 4/28/2013

Project: 40442  
Client: OMI  
City: West, TX  
County: McLennan

GPS coordinates represent approximate locations.  
At no time did AR16 leave the facility boundary during  
4/28/2013

0 125 250 500 750 1,000  
Feet

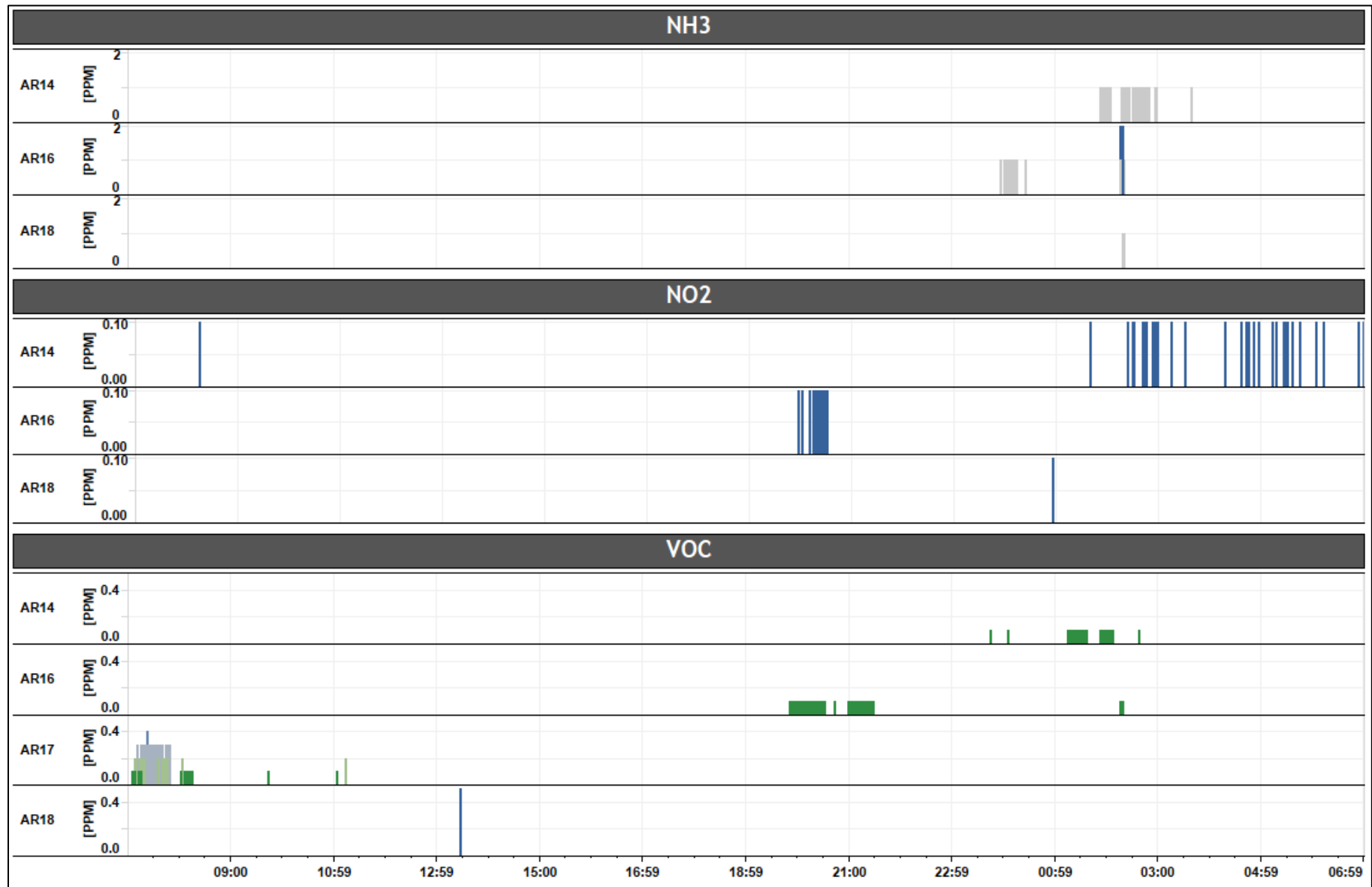


### Legend

- Inactive
- Active
- Mobile AreaRAE 16 (Active)
- Facility Boundary

## AreaRAE Detections

**4/27/2013 07:00 to 4/28/2013 07:00**

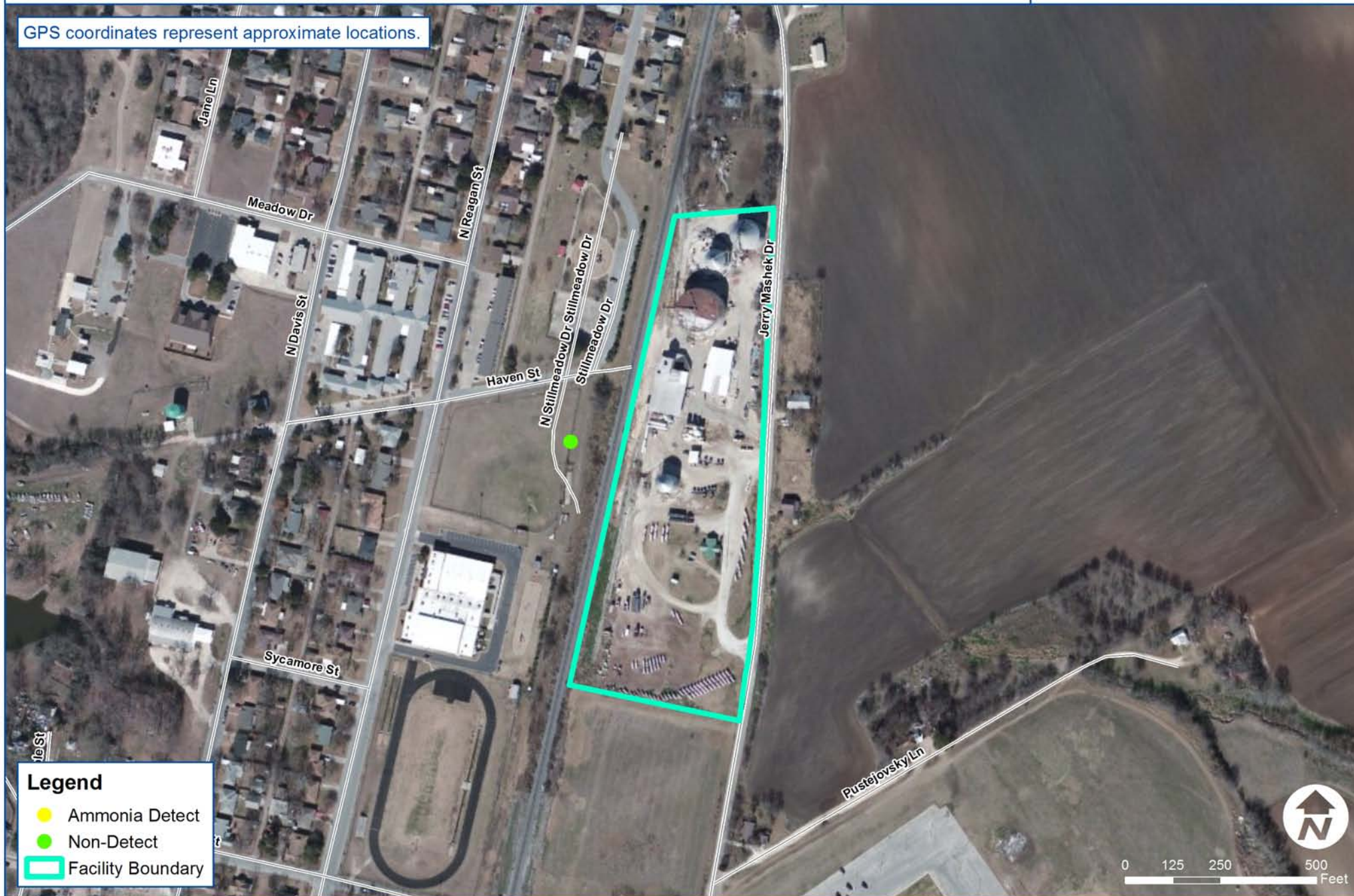




# Manually Logged Ammonia Real-Time Readings 4/27/2013 07:00 to 4/28/2013 07:00

Project: 40442  
Client: OMI  
City: West, TX  
County: McLennan

GPS coordinates represent approximate locations.



## Legend

- Ammonia Detect
- Non-Detect
- Facility Boundary



## Manually Logged NO<sub>2</sub> Real-Time Readings 4/27/2013 07:00 to 4/28/2013 07:00

Project: 40442  
Client: OMI  
City: West, TX  
County: McLennan

GPS coordinates represent approximate locations.

### Legend

NO<sub>2</sub> Detect



NO<sub>2</sub> Non-Detect



Facility Boundary





# Manually Logged VOC Real-Time Readings 4/27/2013 07:00 to 4/28/2013 07:00

Project: 40442  
Client: OMI  
City: West, TX  
County: McLennan

GPS coordinates represent approximate locations.

## Legend

VOC Detect



VOC Non-Detect



Facility Boundary

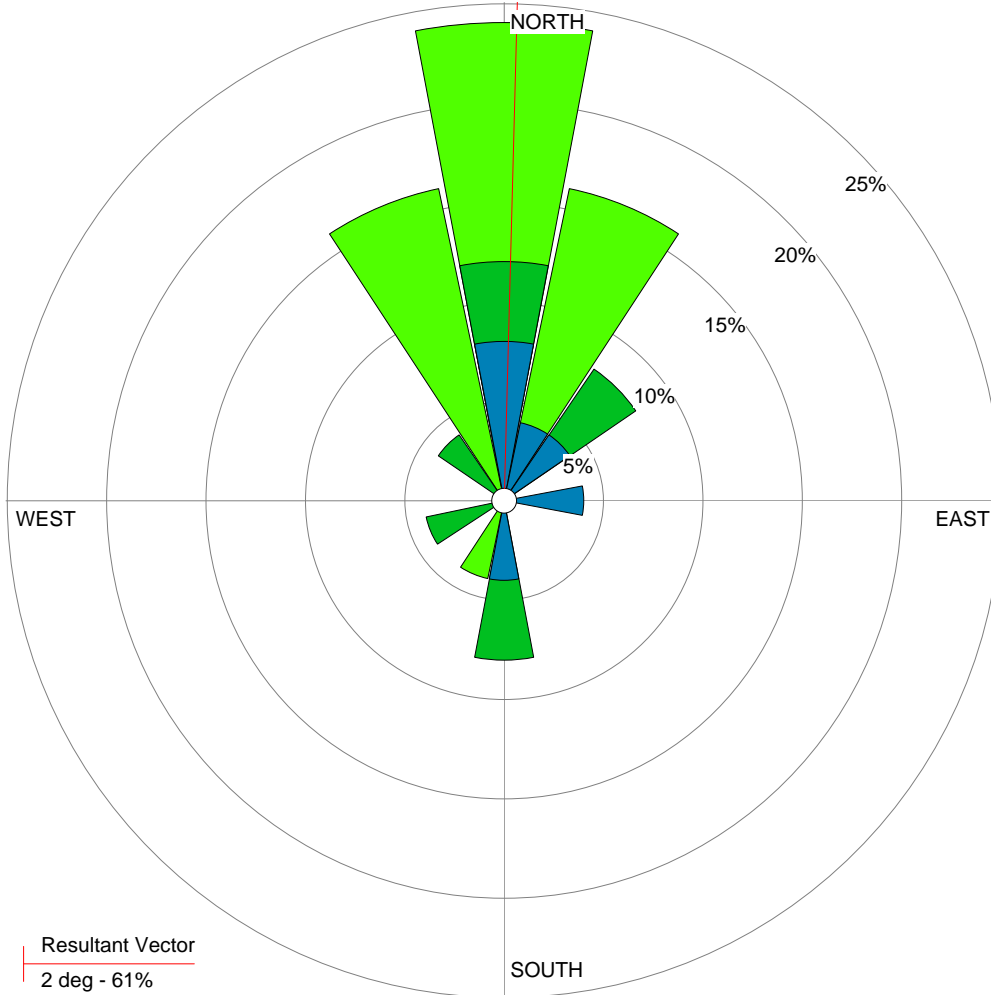


WIND ROSE PLOT:

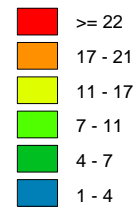
**Wind Speed and Direction 4/27/2013 07:00 to 4/28/2013 7:00**  
**West, Tx**

DISPLAY:

**Wind Speed**  
**Direction (blowing from)**



WIND SPEED  
 (Knots)



Calms: 12.00%

COMMENTS:

Met Station: KACT Waco, TX

COMPANY NAME:

**CTEH**

MODELER:

**Jason Callahan**

CALM WINDS:

**12.00%**

AVG. WIND SPEED:

**5.80 Knots**



PROJECT NO.:

**40442 - OMI**